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METHOD FOR COMPRESSING AND DISPLAYING ANIMATION FILE

Young-Shun Chon

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METHOD FOR COMPRESSING AND DISPLAYING ANIMATION FILE

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Inventor:	Young-Shun Chon
Applicant:	NICT Co., Ltd.

[There are no amendments to this patent.]

Brief description of the figures

Figure 1 is an outline block diagram showing the constitution of an example of a system that directly produces an animation of movie and image data (CF) for an advertisement by an advertiser in an advertisement site on a general Internet [site] and places it in an advertisement by using the animation.

Figure 2 is a flow chart showing the entire process that produces a CF animation by the constitution of Figure 1 and places it in an advertisement.

Figure 3 shows the constitution of a screen being used in a general Internet homepage.

Figure 4 is an outline flow chart showing a process for compressing and displaying an animation file by the present invention.

Explanation of the reference numerals of the main parts of the figures

10	Internet communication network
20	Operation server

30	Advertiser terminal
40	Image database
50	Audio database
60	Advertisement generator
70	Advertisement database
71, 72, 73	Individual advertisements
80	User terminal

Detailed explanation of the invention

Purpose of the invention

Technical field of the invention and prior art of the field

The present invention pertains to a method for compressing and displaying an animation file. More specifically, the present invention pertains to a method for compressing and displaying an animation file that shortens the initial loading time of an animation for an advertisement on Internet, animation on a Internet radio or kiosk, animation of an Internet broadcasting station, etc., and can be transmitted and continuously display the animation.

Recently, along with the gradual improvement of Internet communication networks, the existing character transfer [system] has been developed to a voice transfer and a graphic transfer [system], and Internet animations can be currently transferred, so that Internet broadcastings are active. The above Internet animation means that edits an image picked up by a camera for photographing, put an effect into it, reads it by a player, converts it into a computer file, compresses it, and stores it in a media server.

On the other hand, with the advent of Internet broadcasting, the interest in the development of an advertising method utilizing Internet broadcasting is raised. As animations are possible, one of the advertising methods is a method that displays a CF image on an advertisement window of a screen.

Figure 1 is an outline block diagram showing the constitution of an example of a system that directly produces an animation of movie and image data (CF) for an advertisement by an advertiser in an advertisement site on a general Internet [site] and puts it in an advertisement by using the animation.

In the above-mentioned Figure 1, the system consists of Internet communication network (1), operation server (20), advertiser terminal (30), image database (40), audio database (50), advertisement generator (60), advertisement database (70), and user terminal (80).

The above-mentioned operation server (20) operates an advertisement site to which the present invention is applied on the Internet communication network (10), and the above-mentioned advertiser terminal (30) is connected to the above-mentioned operation server

(20) through the Internet communication network (10) and participates in the production of an advertisement scenario for the content to be advertised.

Also, the above-mentioned image database (40) consists of a large number of animation files, is constituted in a library form, and can be selected from the above-mentioned advertiser terminal (30). Also, the above-mentioned audio database (50) similarly consists of a large number of audio files, is constituted in a library form, and can be selected from the above-mentioned advertiser terminal (30). In other words, a large number of animation files and audio files are provided in a sub-scenario form so that they can be selected in accordance with the preference of a user. For example, if the window is opened by clicking one of a large number of animation files having scenarios, a large number of advertisement files being connected to the advertisement scenario are provided in a clickable state, and a user can select a scenario in accordance with the preference of the user and produce an advertisement.

Also, the above-mentioned advertisement generator (60) generates an individual animation advertisement by using the animation file and the audio file selected by the advertiser terminal (30) and can automatically generate an advertisement by driving an automatic advertisement generation program, and a manager utilizes the selected animation file and audio file and inputs a control signal for various kinds of editing, referring to requested items separately input from the above-mentioned advertise terminal (30), so that an advertisement can be generated.

Also, the above-mentioned advertisement database (70) consists of one or more individual animation advertisement files, and a large number of individual animation advertisements (71, 72, 73) generated from the above-mentioned advertisement generator (60). Also, the above-mentioned user terminal (80) is a user who is connected to the above-mentioned operation server (20) through the Internet communication network (10) and uses the advertisement site of the present invention.

In the system with the above-mentioned constitution, the entire process that produces a CF animation and puts it in an advertisement is explained referring to Figure 2.

First, the above-mentioned operation server (20) constructs and operates an advertisement site to which the present invention is applied on the Internet communication network (10), and the above-mentioned advertisement terminal (30) is connected to the above-mentioned operation server (20) through the Internet communication network (10) (See S21). At that time, in the above-mentioned connecting process, an authentication procedure implemented in the general Internet site is carried out.

Next, if the connected advertiser terminal (30) wants to participate in the production of the advertisement scenario about the advertisement content, the above-mentioned operation server (20) moves the screen to an advertisement production window (see S22).

After moving to the above-mentioned advertisement production window, a list of a large number of animation files and audio files stored in the above-mentioned image database (40) and audio database (50) is displayed on the screen of the advertiser terminal (30) (see S23). At that time, the advertiser makes a selection from the above-mentioned display list in accordance with the preference and can produce an advertisement scenario. At the same time, using the two-way characteristic of the advertisement site of the present invention, separately requested items to be referred during the advertisement production are input (see S24).

Through the above-mentioned processes, if animation and audio files are selected and the requested items are input, the manager of the advertisement site of the present invention produces individual animation advertisements by operating the above-mentioned advertisement generator (60) (see S25). At that time, advertisements are automatically generated by driving the automatic advertisement generation programs, or the selected animation file and audio file are utilized, and referring to the requested items separately input from the above-mentioned advertiser terminal, the manager inputs a control signal for various kinds of editing, so that advertisements can be generated. A large number of individual animation advertisements (71, 72, 73) generated from the above-mentioned advertisement generator (60) are registered and stored in the above-mentioned advertisement database (70) (see S26).

On the other hand, if the above-mentioned user terminal (80) is connected to the operation server (20) through the Internet communication network (10) (see S27), the above-mentioned operation server (20) calls a large number of individual animation advertisements (71, 72, 73) from the advertisement database (70) and respectively displays them on the advertisement window provided to the screen of the Internet homepage (see S28). At that time, as shown in Figure 3, the screen of the Internet homepage is provided with an information providing window and a large number of advertisement windows, and the above-mentioned many advertisement windows are generally positioned at the periphery.

In the above-mentioned operation, if a large number of individual animation advertisements (71, 72, 73) from the advertisement database (70) and displays them on the advertisement windows, if the user clicks the advertisement window, the corresponding CF animation is displayed on the entire screen, or its related separate animation can be displayed.

On the other hand, in the above-mentioned conventional technique, if a CF dynamic file is a fixed size or greater, much time is required for buffering the animation, so that rapid reproduction is impossible. Thus, since it is difficult to attract of the attention of Internet users, the advertisement effect is lowered.

In particular, due to the buffering capacity problem of the system, only one advertisement is applied to a page, and in case buffering is carried out again during the display of a CF

animation, since the animation is stopped, the Internet users frequently move the page, so that the advertisement effect is lowered.

Technical problems to be solved by the invention

The present invention has been created to solve the problems of the above-mentioned prior art, and its purpose is to provide a method for compressing and displaying an animation file that splits a CF animation into a large number of files, compresses them, compresses and stores the first frame of the entire frame as a separate image file, shortens the initial buffering time, continuously displays the animation by shortening the buffering time of the animation display, and improves the advertisement effect.

Constitution and operation of the invention

In order to achieve the above-mentioned purpose, the present invention provides a method for compressing and displaying an animation file consisting of a first process that receives one animation of movie and image data (CF) for advertisement and splits it into a large number of areas in frame units; a second process that images the first frame of the first area among the areas split in the above-mentioned first process and stores it as a compressed file; a third process that compresses the other frames of the above-mentioned first area, stores it as one compressed file, compresses the other areas, and stores them as each compressed file; a fourth process that displays the image of the above-mentioned first frame in an advertisement window for an initial buffering time if the above-mentioned CF animation is displayed; and a fifth process that sequentially drives the other compressed files after the completion of the buffering in the above-mentioned fourth process and continuously displays the CF animation.

The above-mentioned purpose and various advantages of the present invention will be further clarified from the preferred application example of the present invention being mentioned later, referring to the attached figures by skilled persons in this technical field.

Next, a preferred application example of the present invention is explained in detail referring to the attached figures.

The technical concept of the present invention can be applied to the compression of all animation files including animation for an advertisement on Internet, animation for Internet radio or kiosk, animation of an Internet broadcasting station, etc., and the case where the present invention is applied to an Internet CF animation is explained as an example.

Figure 4 is an outline flow chart showing a process for compressing and displaying an animation file by the present invention.

In the above-mentioned Figure 4, first, if a CF animation is input externally, for example, the advertisement generator (60) of Figure 1 (see S41), it is split into a large number of areas in

frame units (see S42). At that time, in the following explanation, it is assumed that the CF animation has a duration of 15 sec and the number of animation frames, that is, the number of pictures being used for one sec is assumed as 24.

In splitting the CF animation with a quantity of 15 sec into a large number of areas, it can be split into the same size or can also be split into different size. In the following explanation, it is assumed that the animation is split into three areas with a duration of 5 sec each. At that time, each area consists of 120 frames.

After the above-mentioned process, the first frame of the first area is imaged, and the first compressed file is generated and stored (see S43). At that time, 119 frames remain in the first area, and the second compressed file is generated by compressing these 119 frames and storing [them] (see S44).

After the completion of the above-mentioned process, the third compressed file and the fourth compressed file are generated by respectively compressing 120 frames of the second area and the third area and stored (see S45). At that time, the above-mentioned first to fourth compressed files are linked and stored (see S46).

Then, if an Internet user is connected to the Internet site to which the present invention is applied and the above-mentioned CF animation is displayed, each compressed file is transmitted to the user terminal (80) as shown in Figure 1 and displayed.

At that time, the above-mentioned user terminal (80) buffers the compressed animation file being received to display it, and the above-mentioned first frame image, that is, the first compressed file is displayed on the advertisement window for an initial buffering time (see S47).

If the initial buffering is completed in the above-mentioned operation, the other compressed files are sequentially driven, and the CF animations are displayed (see S48). At that time, even if the buffering is realized in the middle of the display, the time is shortened so that the user views a continuous display.

The above-mentioned technique of the present invention can be utilized in flash product advertisement, information advertisement, continuous advertisement, list type multiple advertisement, animation conversion method (image assembly insertion type), etc.

In the above explanation, the present invention has been shown and explained in relation to a specific application example, however any person with ordinary skill in the corresponding field can easily understand that the application example can be variously modified and changed within the range where the concept and essence of the present invention exemplified in the range of the claims is not deviated from.

Effect of the invention

As explained above, according to the method for compressing and displaying an animation file of the present invention, a CF animation is split into a large number of files and compressed, and the first frame of the entire frame is compressed and stored as a separate image file, so that the initial buffering time is shortened and the animation is continuously displayed by shortening the buffering time of the animation display, thereby improving the advertisement effect.

Claim

A method for compressing and displaying an animation file, characterized by consisting of a first process that receives one animation of movie and image data (CF) for advertisement and splits it into a large number of areas in frame units; a second process that images the first frame of the first area among the areas split in the above-mentioned first process and stores it as a compressed file; a third process that compresses the other frames of the above-mentioned first area, stores it as one compressed file, compresses the other areas, and stores each of them as a compressed file; a fourth process that displays the image of the above-mentioned first frame on an advertisement window for an initial buffering time if the above-mentioned CF animation is displayed; and a fifth process that sequentially drives the other compressed files after the /6 completion of the buffering in the above-mentioned fourth process and continuously displays the CF animation.

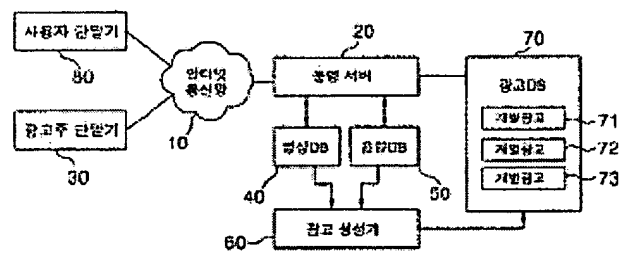


Figure 1

Key:	10	Internet communication network
	20	Operation server
	30	Advertiser terminal
	40	Image DB
	50	Audio DB
	60	Advertisement generator
	70	Advertisement DB
	71	Individual advertisement
	72	Individual advertisement

73 Individual advertisement
80 User terminal

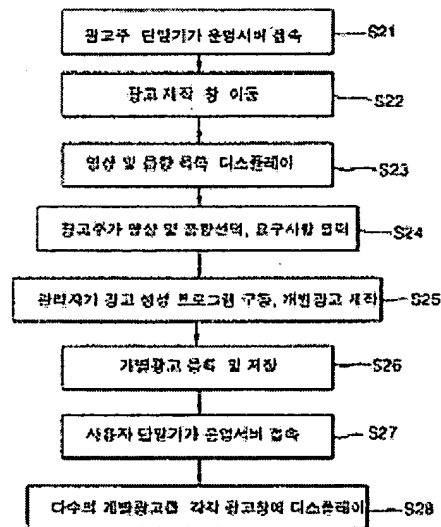


Figure 2

Key: S21 Operation server connection of advertiser terminal
S22 Advertisement production window movement
S23 Display of image and audio lists
S24 Image an audio selection and demanded item input of advertiser
S25 Advertisement generation program driving and individual advertisement production of manager
S26 Individual advertisement registration and storage
S27 Operation server connection of user terminal
S28 Display of a number of individual advertisements on each advertisement window

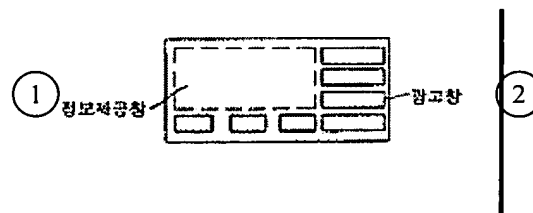


Figure 3

Key: 1 Information providing window
2 Advertisement window

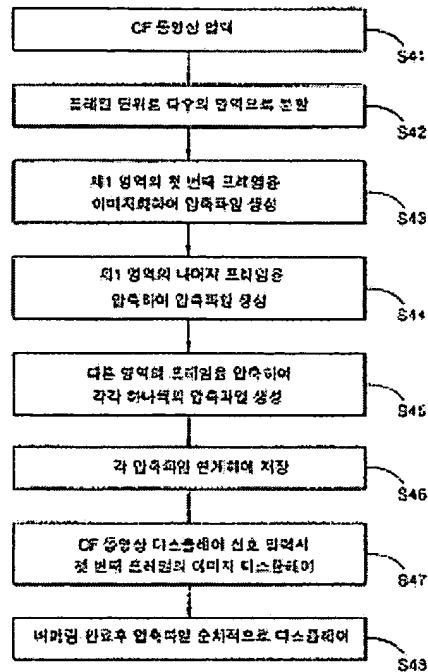


Figure 4

- Key:
- S41 CF animation input
 - S42 Split of the animation into a large number of areas at a unit of frame
 - S43 Imaging of the first frame of the first area and generation of a compressed file
 - S44 Compression of the other frames of the first area and generation of compressed files
 - S45 Compression of the frames of the other areas and generation of each compressed file
 - S46 Linking and storage of each compressed file
 - S47 Image display of the first frame for a CF animation display signal input
 - S48 Sequential display of the compressed files after the completion of buffering